











1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period to be covered by IAP (Date/Time) From: 0600 2/11/11 To: 0600 3/4/11	CG IAP COVER SHEET															
3. Approved by Incident Commander(s):																	
ORG US EPA DFG LAWPD RP/ACTA	<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">NAME</td> <td style="width: 30%;"></td> <td style="width: 40%;"></td> </tr> <tr> <td>Marty Powell / Jason Musantel</td> <td></td> <td>2/10/11</td> </tr> <tr> <td>Sau Garcia #659 / Bryan Gollhofer</td> <td></td> <td>2/10/11</td> </tr> <tr> <td>Howard Wong</td> <td></td> <td>2/10/11 #2936</td> </tr> <tr> <td>Elaine Silvestro</td> <td></td> <td></td> </tr> </table>		NAME			Marty Powell / Jason Musantel		2/10/11	Sau Garcia #659 / Bryan Gollhofer		2/10/11	Howard Wong		2/10/11 #2936	Elaine Silvestro		
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Marty Powell / Jason Musantel		2/10/11															
Sau Garcia #659 / Bryan Gollhofer		2/10/11															
Howard Wong		2/10/11 #2936															
Elaine Silvestro																	
<h2 style="margin: 0;">INCIDENT ACTION PLAN</h2> <p style="margin: 5px 0;">The items checked below are included in this Incident Action Plan:</p> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> ICS 202-CG (Response Objectives) </div> <div style="margin-top: 10px;"> <input type="checkbox"/> ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart) </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> ICS 204-CGs (Assignment Lists) One Copy each of any ICS 204-CG attachments: </div> <div style="margin-top: 10px;"> <input type="checkbox"/> ICS 205-CG (Communications Plan) </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> ICS 206-CG (Medical Plan) </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> ICS 208-CG (Site Safety Plan) or Note SSP Location </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Map/Chart </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Weather forecast / Tides/Currents </div> <div style="margin-top: 10px;"> Other Attachments </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Incident Phone List </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Waste Segregation and Qualification Plan </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> MSDS </div> <div style="margin-top: 10px;"> <input checked="" type="checkbox"/> Emergency Rain Event Notification </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div> <div style="margin-top: 10px;"> <input type="checkbox"/> _____ </div>																	
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%;">4. Prepared by:</td> <td style="width: 50%;">Date/Time</td> </tr> <tr> <td>J. Pantoja</td> <td>2/10/11 0800</td> </tr> </table>			4. Prepared by:	Date/Time	J. Pantoja	2/10/11 0800											
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J. Pantoja	2/10/11 0800																

1. Incident Name Dominguez Channel Mystery Oil Spill	2. Operational Period (Date/Time) From: 2-11-11 0600 To: 3-4-11 0600	INCIDENT OBJECTIVES ICS 202-CG
3. Objective(s) <ul style="list-style-type: none"> - SAFETY: Ensure the safety of all response personnel, facility employees, and public. See site safety plans for specifics - ISOLATION AND DENY ENTRY: Keep all non response personnel out of response areas. - NOTIFICATIONS: Notify proper authorities of any significant changes in spill situations. - ID AND HAZARD ASSESSMENT: See site safety plan. - ACTION PLANNING: Maintain containment and remove oil at source, pump station and retention basin. - CONTAINMENT AND CONTROL: Investigate possible sources and control when found. - PROTECTIVE ACTIONS: Continually assess downstream impacts and potential protective and recovery options (Marina's). - DECONTAMINATION AND CLEANUP: Ensure proper decontamination of personnel and equipment. - DISPOSAL: Dispose of all recovered as waste as law requires. Ensure that attached Waste Segregation Plan is followed. - DOCUMENTATION: Ensure proper documentation of all response activities, waste and segregation, and costs associated. 		
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions) <ul style="list-style-type: none"> - SHELL SOURCE AREA: <ul style="list-style-type: none"> -Obtain Right-of Entry (ACTA). -Mobilize equipment (NRC). -Continue recovery of surface product (NRC). -Contain and segregate waste; keep separate from other wastes (NRC). - RR ROW OUTFALL RECOVERY: <ul style="list-style-type: none"> -Mobilized equipment (NRC). -Maintain established temporary sand bag drain and pond. -Continue skimming and recovery efforts to minimize downstream impacts to pump station. -Assess cleanup issues to implement once source has been isolated. -During a rain event initiate call out list and staff as necessary. - SOURCE INVESTIGATION <ul style="list-style-type: none"> -Work in conjunction with agencies to determine source. -Once source is found, work with responsible party(ies) to revise IAP. -Additional ICS 204's as needed for new projects to identify source. - CITY PUMP STATION <ul style="list-style-type: none"> -Continue recovery of surface water within vault. -Pump down station as needed to reduce water level and reduce possibility of flooding. Portable sump pump as a possibility. -Continue to assess. Approved Site Safety Plan Located at:		
5. Prepared by: (Planning Section Chief) J. Pantoja		Date/Time 2/10/11 0800




1. Incident Name: Dominguez Mystery Oil Spill		4. Operational Period: From: 0600 2/11/11 To: 0600 3/4/11			MEDICAL PLAN ICS 206 - EPA				
5. Incident Medical Aid Station									
Medical Aid Stations		Location			Paramedics Yes No				
6. Transportation									
A. Ambulance Services									
Name		Address		Phone		Paramedics Yes No			
South County Medical Transport	228 E. Pacific Coast Highway, Long Beach		562-599-0659			X			
B. Incident Ambulances									
7. Hospitals									
Name		Address		Travel Time Air Ground		Helipad Yes No		Burn Center Yes No	
Pacific Hospital of Long Beach	2776 Pacific Ave. Long Beach 90806			24	562-997-2000		X		X
8. Medical Emergency Procedures									
9. Prepared by (Medical Unit Leader) J. Pantoja			Date/Time 2/10/11		10. Reviewed by (Safety Officer)			Date/Time	



Your National Weather Service forecast

3 Miles ESE Lomita CA



Enter Your "City, ST" or zip code

NWS Los Angeles/Oxnard, CA

Point Forecast: 3 Miles ESE Lomita CA


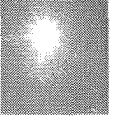

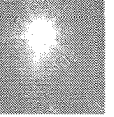





33.78°N 118.27°W (Elev. 16 ft)

Mobile Weather Information | En Español

Last Update: 2:21 pm PST Feb 9, 2011

Forecast Valid: 5pm PST Feb 9, 2011-6pm PST Feb 16, 2011

Forecast at a Glance

Tonight	Thursday	Thursday Night	Friday	Friday Night	Saturday	Saturday Night	Sunday	Sunday Night
								
Clear	Sunny	Clear	Sunny	Clear	Sunny	Mostly Clear	Sunny	Partly Cloudy
Lo 49 °F	Hi 73 °F	Lo 48 °F	Hi 75 °F	Lo 50 °F	Hi 74 °F	Lo 50 °F	Hi 70 °F	Lo 50 °F

Detailed 7-day Forecast

Hazardous weather condition(s):

Hazardous Weather Outlook

Tonight: Clear, with a low around 49. North northwest wind 5 to 10 mph becoming east northeast.

Thursday: Sunny, with a high near 73. East northeast wind around 5 mph becoming calm.

Thursday Night: Clear, with a low around 48. North northwest wind around 5 mph.

Friday: Sunny, with a high near 75. Calm wind becoming northeast around 5 mph.

Friday Night: Clear, with a low around 50. West northwest wind between 5 and 10 mph becoming calm.

Saturday: Sunny, with a high near 74.

Saturday Night: Mostly clear, with a low around 50.

Sunday: Sunny, with a high near 70.

Sunday Night: Partly cloudy, with a low around 50.

Monday: Mostly sunny, with a high near 66.

Monday Night: Mostly cloudy, with a low around 50.

Tuesday: A slight chance of rain. Partly sunny, with a high near 64.

Tuesday Night: A slight chance of rain. Mostly cloudy, with a low around 50.

Wednesday: A slight chance of rain. Mostly cloudy, with a high near 60.

Current Conditions

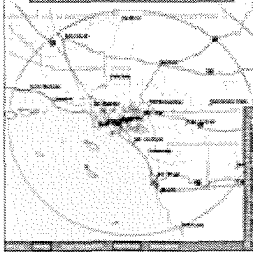
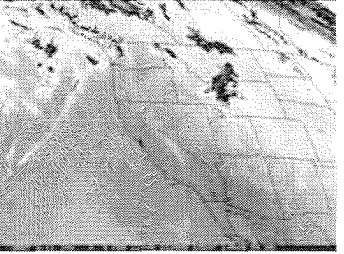
[Move Down]

Torrance, Zamperini Field Airport

Last Update on 09 Feb 15:47 PST

<p>Fair</p> <p>70°F</p> <p>(21°C)</p>	<p>Humidity: 23 %</p> <p>Wind Speed: WSW 9 MPH</p> <p>Barometer: 30.04 in (N/A mb)</p> <p>Dewpoint: 30°F (-1°C)</p> <p>Visibility: 20.00 Miles</p> <p>More Local Wx: 3 Day History:</p>
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Radars and Satellite Images

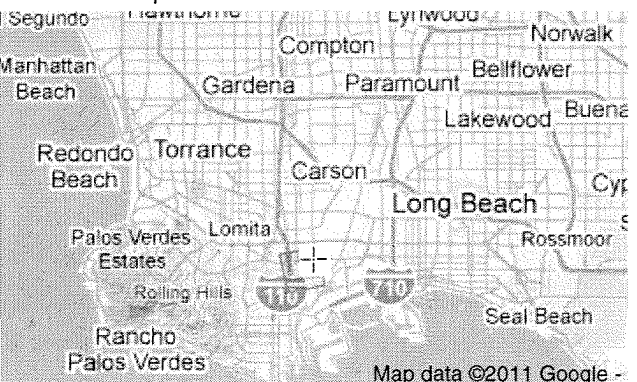



Detailed Point Forecast

[Move Up]

Click Map for Forecast

Disclaimer

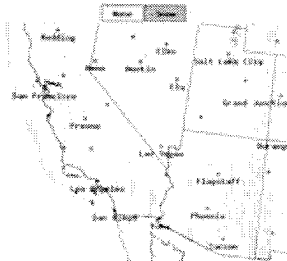
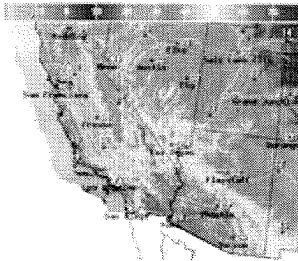


Map data ©2011 Google

Requested Location Forecast Area
Lat/Lon: 33.78°N 118.27°W Elevation: 16 ft



National Digital Forecast Database



Additional Forecasts & Information

Zone Area Forecast for Los Angeles County Coast
including Downtown Los Angeles, CA

Forecast Discussion

Printable Forecast

Text Only Forecast

Hourly Weather Graph

Tabular Forecast

Quick Forecast

International System of Units

About Point Forecasts

Observation Map (Regional)

Observation Map (Los Angeles)

Warnings

Experimental Graphical Forecasts

Quantitative Precipitation Forecast

Climatology

Forecast Weather Table Interface

Webmaster
National Weather Service:
Los Angeles/Oxnard, CA

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February - Long Beach, Terminal Island

Date	Day	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
02/01/2011	Tue	01:39AM	LST 1.8 L	07:46AM	LST 6.1 H	02:48PM	LST -0.9 L	09:11PM	LST 4.1 H		
02/02/2011	Wed	02:16AM	LST 1.6 L	08:21AM	LST 6.0 H	03:16PM	LST -0.8 L	09:36PM	LST 4.3 H		
02/03/2011	Thu	02:51AM	LST 1.5 L	08:54AM	LST 5.8 H	03:43PM	LST -0.6 L	10:01PM	LST 4.3 H		
02/04/2011	Fri	03:25AM	LST 1.4 L	09:25AM	LST 5.5 H	04:07PM	LST -0.3 L	10:25PM	LST 4.4 H		
02/05/2011	Sat	04:00AM	LST 1.4 L	09:56AM	LST 5.0 H	04:30PM	LST 0.1 L	10:51PM	LST 4.5 H		
02/06/2011	Sun	04:37AM	LST 1.4 L	10:28AM	LST 4.5 H	04:53PM	LST 0.5 L	11:17PM	LST 4.5 H		
02/07/2011	Mon	05:19AM	LST 1.5 L	11:02AM	LST 3.9 H	05:14PM	LST 0.9 L	11:47PM	LST 4.5 H		
02/08/2011	Tue	06:10AM	LST 1.6 L	11:43AM	LST 3.3 H	05:34PM	LST 1.4 L				
02/09/2011	Wed	12:22AM	LST 4.4 H	07:21AM	LST 1.6 L	12:43PM	LST 2.7 H	05:51PM	LST 1.8 L		
02/10/2011	Thu	01:08AM	LST 4.4 H	09:06AM	LST 1.5 L	03:15PM	LST 2.3 H	05:58PM	LST 2.2 L		
02/11/2011	Fri	02:14AM	LST 4.4 H	10:50AM	LST 1.1 L						
02/12/2011	Sat	03:33AM	LST 4.6 H	11:50AM	LST 0.5 L	07:05PM	LST 2.9 H	10:00PM	LST 2.7 L		
02/13/2011	Sun	04:43AM	LST 5.0 H	12:32PM	LST -0.1 L	07:20PM	LST 3.2 H	11:21PM	LST 2.5 L		
02/14/2011	Mon	05:40AM	LST 5.6 H	01:07PM	LST -0.6 L	07:42PM	LST 3.6 H				
02/15/2011	Tue	12:17AM	LST 2.1 L	06:28AM	LST 5.0 H	01:41PM	LST -1.0 L	08:06PM	LST 4.0 H		
02/16/2011	Wed	01:05AM	LST 1.6 L	07:14AM	LST 6.4 H	02:14PM	LST -1.2 L	08:34PM	LST 4.4 H		
02/17/2011	Thu	01:51AM	LST 1.1 L	07:58AM	LST 6.5 H	02:47PM	LST -1.3 L	09:04PM	LST 4.8 H		
02/18/2011	Fri	02:37AM	LST 0.6 L	08:43AM	LST 6.4 H	03:21PM	LST -1.1 L	09:37PM	LST 5.2 H		
02/19/2011	Sat	03:25AM	LST 0.3 L	09:29AM	LST 6.0 H	03:55PM	LST -0.7 L	10:12PM	LST 5.5 H		
02/20/2011	Sun	04:16AM	LST 0.1 L	10:17AM	LST 5.4 H	04:30PM	LST -0.2 L	10:50PM	LST 5.7 H		
02/21/2011	Mon	05:11AM	LST 0.1 L	11:10AM	LST 4.5 H	05:05PM	LST 0.4 L	11:32PM	LST 5.7 H		
02/22/2011	Tue	06:15AM	LST 0.3 L	12:12PM	LST 3.7 H	05:44PM	LST 1.1 L				
02/23/2011	Wed	12:21AM	LST 5.5 H	07:33AM	LST 0.4 L	01:39PM	LST 3.0 H	06:29PM	LST 1.8 L		
02/24/2011	Thu	01:23AM	LST 5.3 H	09:09AM	LST 0.4 L	03:51PM	LST 2.8 H	07:39PM	LST 2.3 L		
02/25/2011	Fri	02:43AM	LST 5.0 H	10:42AM	LST 0.1 L	05:47PM	LST 3.1 H	09:37PM	LST 2.6 L		
02/26/2011	Sat	04:09AM	LST 5.0 H	11:50AM	LST -0.2 L	06:44PM	LST 3.5 H	11:13PM	LST 2.4 L		
02/27/2011	Sun	05:21AM	LST 5.2 H	12:40PM	LST -0.4 L	07:20PM	LST 3.8 H				
02/28/2011	Mon	12:15AM	LST 2.1 L	06:16AM	LST 5.4 H	01:19PM	LST -0.5 L	07:48PM	LST 4.0 H		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

March - Long Beach, Terminal Island

Date	Day	Time	Height	Time	Height	Time	Height	Time	Height	Time	Height
03/01/2011	Tue	12:59AM LST	1.7 L	07:00AM LST	5.5 H	01:51PM LST	-0.5 L	08:12PM LST	4.2 H		
03/02/2011	Wed	01:36AM LST	1.4 L	07:37AM LST	5.5 H	02:19PM LST	-0.4 L	08:34PM LST	4.4 H		
03/03/2011	Thu	02:08AM LST	1.1 L	08:10AM LST	5.4 H	02:43PM LST	-0.3 L	08:55PM LST	4.6 H		
03/04/2011	Fri	02:39AM LST	0.9 L	08:41AM LST	5.2 H	03:05PM LST	-0.1 L	09:15PM LST	4.7 H		
03/05/2011	Sat	03:10AM LST	0.7 L	09:11AM LST	4.9 H	03:26PM LST	0.2 L	09:37PM LST	4.8 H		
03/06/2011	Sun	03:42AM LST	0.6 L	09:42AM LST	4.5 H	03:47PM LST	0.6 L	09:59PM LST	4.9 H		
03/07/2011	Mon	04:17AM LST	0.6 L	10:15AM LST	4.1 H	04:07PM LST	0.9 L	10:23PM LST	4.9 H		
03/08/2011	Tue	04:54AM LST	0.7 L	10:51AM LST	3.6 H	04:26PM LST	1.3 L	10:49PM LST	4.8 H		
03/09/2011	Wed	05:39AM LST	0.8 L	11:35AM LST	3.1 H	04:43PM LST	1.7 L	11:21PM LST	4.7 H		
03/10/2011	Thu	06:37AM LST	1.0 L	12:40PM LST	2.6 H	04:56PM LST	2.1 L				
03/11/2011	Fri	12:02AM LST	4.6 H	08:03AM LST	1.0 L						
03/12/2011	Sat	01:05AM LST	4.4 H	09:47AM LST	0.8 L						
03/13/2011	Sun	03:39AM LDT	4.4 H	12:00PM LDT	0.4 L	07:25PM LDT	3.1 H	10:51PM LDT	2.8 L		
03/14/2011	Mon	05:08AM LDT	4.7 H	12:49PM LDT	0.0 L	07:39PM LDT	3.5 H				
03/15/2011	Tue	12:13AM LDT	2.3 L	06:15AM LDT	5.2 H	01:28PM LDT	-0.4 L	08:00PM LDT	3.9 H		
03/16/2011	Wed	01:09AM LDT	1.7 L	07:10AM LDT	5.6 H	02:03PM LDT	-0.7 L	08:25PM LDT	4.4 H		
03/17/2011	Thu	01:57AM LDT	1.0 L	08:00AM LDT	5.8 H	02:38PM LDT	-0.8 L	08:54PM LDT	5.0 H		
03/18/2011	Fri	02:44AM LDT	0.3 L	08:48AM LDT	5.9 H	03:12PM LDT	-0.7 L	09:25PM LDT	5.6 H		
03/19/2011	Sat	03:30AM LDT	-0.3 L	09:36AM LDT	5.7 H	03:46PM LDT	-0.4 L	09:58PM LDT	6.0 H		
03/20/2011	Sun	04:17AM LDT	-0.6 L	10:24AM LDT	5.4 H	04:20PM LDT	0.0 L	10:34PM LDT	6.2 H		
03/21/2011	Mon	05:07AM LDT	-0.8 L	11:15AM LDT	4.7 H	04:56PM LDT	0.5 L	11:12PM LDT	6.2 H		
03/22/2011	Tue	06:00AM LDT	-0.7 L	12:11PM LDT	4.1 H	05:33PM LDT	1.1 L	11:55PM LDT	6.0 H		
03/23/2011	Wed	07:00AM LDT	-0.5 L	01:17PM LDT	3.5 H	06:14PM LDT	1.7 L				
03/24/2011	Thu	12:43AM LDT	5.6 H	08:11AM LDT	-0.1 L	02:48PM LDT	3.1 H	07:05PM LDT	2.2 L		
03/25/2011	Fri	01:44AM LDT	5.0 H	09:37AM LDT	0.1 L	04:50PM LDT	3.1 H	08:34PM LDT	2.7 L		
03/26/2011	Sat	03:08AM LDT	4.6 H	11:04AM LDT	0.1 L	06:21PM LDT	3.4 H	10:44PM LDT	2.7 L		
03/27/2011	Sun	04:43AM LDT	4.5 H	12:13PM LDT	0.0 L	07:09PM LDT	3.7 H				
03/28/2011	Mon	12:13AM LDT	2.3 L	06:01AM LDT	4.5 H	01:03PM LDT	0.0 L	07:42PM LDT	4.0 H		
03/29/2011	Tue	01:09AM LDT	1.8 L	06:59AM LDT	4.6 H	01:42PM LDT	0.0 L	08:08PM LDT	4.3 H		
03/30/2011	Wed	01:51AM LDT	1.4 L	07:44AM LDT	4.7 H	02:12PM LDT	0.1 L	08:30PM LDT	4.5 H		
03/31/2011	Thu	02:25AM LDT	1.0 L	08:22AM LDT	4.7 H	02:38PM LDT	0.3 L	08:51PM LDT	4.8 H		

All times are listed in Local Standard Time(LST) or, Local Daylight Time (LDT) (when applicable). All heights are in feet referenced to Mean Lower Low Water (MLLW).

1. Incident Name Dominguez Channel Mystery Oil Spill		2. Operational Period (Date/Time) From: 2/11/11 0600 To: 3/4/11 0600		Assignment List ICS 204-CG																					
3. Branch Recovery Group		4. Division/Group/Staging Right of Way Trench																							
<table style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 30%;">5. Operations Personnel</th> <th style="width: 30%;">Name</th> <th style="width: 30%;">Affiliation</th> <th style="width: 10%;">Contact # (s)</th> </tr> <tr> <td>Operations Section Chief:</td> <td>Steve Pederson</td> <td>City of Los Angeles</td> <td>213 - 725 - 6308</td> </tr> <tr> <td>Branch Director:</td> <td>Elaine Silvetto</td> <td>ACTA</td> <td>310 - 650 - 3359</td> </tr> <tr> <td colspan="4">Division/Group Supervisor/STAM: NRC Environmental Services, Inc.</td> </tr> </table>						5. Operations Personnel	Name	Affiliation	Contact # (s)	Operations Section Chief:	Steve Pederson	City of Los Angeles	213 - 725 - 6308	Branch Director:	Elaine Silvetto	ACTA	310 - 650 - 3359	Division/Group Supervisor/STAM: NRC Environmental Services, Inc.							
5. Operations Personnel	Name	Affiliation	Contact # (s)																						
Operations Section Chief:	Steve Pederson	City of Los Angeles	213 - 725 - 6308																						
Branch Director:	Elaine Silvetto	ACTA	310 - 650 - 3359																						
Division/Group Supervisor/STAM: NRC Environmental Services, Inc.																									
6. Resources Assigned "X" indicates 204a attachment with additional instructions																									
Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	↓																				
Senior Project Manager	Asher Grimes	310 - 629 - 2760	1		<input type="checkbox"/>																				
Project Accountant			1		<input type="checkbox"/>																				
Project Managert	Mike Sica	310 - 628 - 0725	1		<input type="checkbox"/>																				
Field Supervisor			2		<input type="checkbox"/>																				
Vacuum Truck Driver			2	to be mobilized	<input type="checkbox"/>																				
Technician			12	to be mobilized	<input type="checkbox"/>																				
4 pickup trucks				to be mobilized	<input type="checkbox"/>																				
2 gear trucks				to be mobilized	<input type="checkbox"/>																				
ER Trailer				to be mobilized	<input type="checkbox"/>																				
Incident command Trailer				to be mobilized	<input type="checkbox"/>																				
1 Tractor				to be mobilized	<input type="checkbox"/>																				
7. Work Assignments Maintain walls with lessons learned in mind. Widen outfall to allow more retention time. Recover liquids in vacuum truck.																									
8. Special Instructions Build containment with permanency in mind. Keep sandbags segregated from Shell site. - Read, understand, and follow site safety plan. - Do not attempt to captured or approach oiled / injured wild life. Notify an on - site DFG personnel or a member of the Unified Command. - Report all oiled wildlife to Cory Kong @ 562 - 477 - 7081. - Refer all media questions and concerns to martin Powell @ 562 - 760 - 7028.																									
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10. Prepared by: J. Pantoja 0800		11. Reviewed by (PSC): Date/Time 2/10/11		12. Reviewed by (OSC): Date/Time																					

1. Incident Name Dominguez Channel Mystery Oil Spill		2. Operational Period (Date/Time) From: 2/11/11 0600 To: 3/4/11 0600		Assignment List ICS 204-CG																	
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Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	↓																
1 Vacuum trailer			1	to be mobilized	<input type="checkbox"/>																
1 generator			1	Pre staged	<input type="checkbox"/>																
1 Skimmer			1	Pre staged	<input type="checkbox"/>																
1 Air Compressor			2	Pre staged	<input type="checkbox"/>																
2 3" pumps			2	Pre staged	<input type="checkbox"/>																
12 25" hose			12	Pre staged	<input type="checkbox"/>																
2 light towers				Pre staged	<input type="checkbox"/>																
2 - 4" trash pumps				Pre staged	<input type="checkbox"/>																
8" sorbent boom				Pre staged	<input type="checkbox"/>																
sorbent pads				Pre staged	<input type="checkbox"/>																
visqueen				Pre staged	<input type="checkbox"/>																

7. Work Assignments

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8. Special Instructions
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 - Read, understand, and follow site safety plan.
 - Do not attempt to capture or approach oiled / injured wild life. Notify an on - site DFG personnel or a member of the Unified Command.
 - Report all oiled wildlife to Cory Kong @ 562 - 477 - 7081.
 - Refer all media questions and concerns to martin Powell @ 562 - 760 - 7028.

9. Communications (radio and/or phone contact numbers needed for this assignment)

Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager

Emergency Communications
 Medical _____ Evacuation _____ Other _____

10. Prepared by: J. Pantoja 0800	Date/Time 2/10/11	11. Reviewed by (PSC): 	Date/Time 	12. Reviewed by (OSC): 	Date/Time
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Pressure washer				To be mobilized	<input type="checkbox"/>																
Skidsteer loader				To be mobilized	<input type="checkbox"/>																
2 Baker Tanks				Pre staged	<input type="checkbox"/>																
Rocket launcher				To be mobilized	<input type="checkbox"/>																
Roll off bins				To be mobilized	<input type="checkbox"/>																
					<input type="checkbox"/>																
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Emergency Communications

Medical _____ Evacuation _____ Other _____

10. Prepared by: J. Pantoja 0800	Date/Time 2/10/11	11. Reviewed by (PSC):	Date/Time	12. Reviewed by (OSC):	Date/Time
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1. Incident Name Dominguez Channel Mystery Oil Spill		2. Operational Period (Date/Time) From: 0600 2/11/11 To: 0600 3/4/11		Assignment List ICS 204-CG	
3. Branch Recovery Group		4. Division/Group/Staging City Outfall Pump			
5. Operations Personnel					
	Name	Affiliation	Contact # (s)		
	Operations Section Chief: <u>Steve Pedersen</u>	City of Los Angeles	213-725-6308		
	Branch Director: <u>Elaine Silvestro</u>	ACTA	310-650-3359		
	Division/Group Supervisor/STAM: <u>Mike Sica</u>	NRC Environmental Services	310-628-0725		
6. Resources Assigned					
"X" indicates 204a attachment with additional instructions					
Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# of Persons	Reporting Info/Notes/Remarks	
1 Supervisor			2	ACTA	<input type="checkbox"/>
6" pump					<input type="checkbox"/>
Absorbent boom					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
7. Work Assignments					
Continue utilizing pads and sorbent boom to remove sheen and oil and maintain passive cleaning operations. Man the pump Monday thru Friday at 0800; 1500; 2400 and on Saturday and Sunday at 0800 and 2000.					
8. Special Instructions					
All discharge must be monitored. Working near water. Wear life jackets. - Read, understand, and follow site safety plan. - Do not attempt to capture or approach oiled/injured wildlife. Notify an on-site DFG personnel or a member of the Unified Command. - Report all oiled wildlife to Cory Kong @ 562-477-7081 - Refer all media questions and concerns to Martin Powell @ 562-760-7028					
9. Communications (radio and/or phone contact numbers needed for this assignment)					
Name/Function	Radio: Freq./System/Channel	Phone	Cell/Pager		
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
Emergency Communications					
Medical _____	Evacuation _____	Other _____			
10. Prepared by A. Wilson		11. Reviewed by (PSC) _____		12. Reviewed by (OSC) _____	
Date/Time 2/11/11 0800		Date/Time _____		Date/Time _____	

Dominguez Channel Mystery Oil Spill Emergency Rain Event Notifications

- Steve McQuay, DWP Sanitation Supervisor, City of Los Angeles Pump Station Operator
24-Hour Notification: 213-300-3662
Alternates:
 - Howard Wong: 213-725-6313
 - Steven Pedersen: 213-725-6308
- NRC Environmental
24-Hour Notification: 1-800-337-7455
Alternates:
 - Michael Sica: 310-628-0725
 - Jim Kiatos: 310-628-1211
- Randy Stuart, Balfour Beatty Rail for RR Crossing Access
24-Hour Notification: 310-863-0912
Mike Mejia for all TV events: 310-863-0860
- Tesoro Tower/Shell Sump Valve Operation
310-522-8665 (if no answer will roll over to cell phone for on-call person)
- Steven Pedersen, LA City (Courtesy Call): 213-725-6308
Alternates:
 - Joe Fortaleza: 213-725-6304
 - Tri Tran: 213-725-6306
- OSC Marty Powell, EPA: 562-760-7028

Waste Segregation and Quantification Plan

Date: January 14, 2011

Incident Name: Dominguez Channel Mystery oil Spill

Location Latitude: 33.785010, Longitude: -118.2372450

OBJECTIVE

To facilitate proper disposal and quantification of recovered pollutant generated from response and recovery operations associated with the incident named above.

WASTE STREAM SEPARATION

Recovered pollutant shall be separated by waste stream type and location where the waste was recovered. Pollutants recovered from Waters of the State shall be kept separate from pollutants recovered elsewhere.

Liquids: Liquids shall be held in secure tanks for gauging to determine oil content by DFG and Responsible Party representatives prior to disposal. In order to expedite cleanup and disposal, a direct assessment of the contents can be made, or a representative sample may be analyzed by the TSD Facility. Liquids recovered during flushing or steaming and Decontamination operations should be kept separate from recovered free floating oil.

Solids: Recovered pollutant held in solids will be placed onto roll-off bins or over-pack drums with tare weights. Solids shall be segregated as follows; sorbents, debris (oiled), soil, or PPE. Solids recovered from Waters of the State or adjacent shorelines shall be stored separate from those recovered elsewhere.

Vegetation/Wildlife: Vegetation and/or wildlife removed in the cleanup operation will be bagged and weighed separately.

QUANTIFICATION

Quantification of recovered pollutants will be conducted in accordance with California Code of Regulations Title 14, Section 877. The Responsible Party and the Department of Fish and Game may stipulate to the amount of oil spilled and/or recovered. The amount of recovered pollutant can be determined by visual assessment by DFG and responsible party or by lab analysis of samples taken in the presence of DFG and responsible party representatives.

FINAL DISPOSAL

When quantification is final, the waste may be disposed of in accordance with all Federal, State, and Local laws. A copy of the Hazardous Waste Manifest and associated documents shall be provided to the DFG as proof of disposal.

INCIDENT NAME: *Dominguez Channel Mystery oil Spill*

The following table indicates the types of waste to segregate. Place a checkmark in the appropriate box for this incident. This plan should be included in the IAP.

Waters of the State of California			
Liquids		Solids	
Free Floating Product		Sorbent materials	
Flushing and/or Steam Cleaning		Vegetation / Sediment	
Decontamination		Impacted Wildlife	
		Oiled Trash & Debris	
		PPE	
		Response Materials	
Non-Waters of the State			
Liquids		Solids	
Recovered on property	✓	Sorbent Boom/Pads	✓
Recovered off property		Vegetation / Soils	
W/I 2ndry containment		Impacted Wildlife	
Product from Source		Oiled Trash & Debris	✓
Steam Cleaning		PPE	✓
Decontamination	✓	Response Materials	✓

Comments: _____

1. Incident Name Dominguez Channel Mystery Oil Spill		2. Operational Period (Date / Time) From: 02/11/11 0600 To: 03/04/11 0600		COMMUNICATIONS LIST ICS 205A-CG	
3. Basic Local Communications Information					
Agency	Name	Method(s) of contact (radio frequency, phone, pager, cell #(s), etc.)			
US EPA	Jason Musante	213-479-2120			
US EPA	Martin Powell	562-760-7028			
CA DFG OSPR	Anastasia Norris	310-310-9917			
CA DFG OSPR	James Foto	562-598-4292			
LA WPD	Howard Wong	213-725-6313			
BBRI	Mike Mejia	310-863-0860			
Shell	Brett Bernstein	213-494-6598			
OLBI	Dean Persinger	562-624-3284			
OLBI	Charlie Waters	562-900-2347			
ACTA	Elaine Silvestro	310-650-3359			
ACTA	Jorge Pantoja	310-816-0460			
EPA START	Adam Smith	310-405-2393			
CA DFG OSPR	Bryan Gollhofer	562-708-7757			
CA DFG OSPR	Sau Garcia	562-843-2714			
LA WPD	Eric Lee	213-725-6313			
LA WPD	Gonzalo Barriga	213-725-8862			
CAL FIRE	Tom Williams	562-425-1902			
CA DFG OSPR	Corey Kong	562-477-7081			
Tesoro	Pang Mueller	310-522-4976			
Tesoro	Emile Nour	310-522-6212			
Crimson	Tracy Wilkinson	562-346-4296			
Crimson	Mike Romley	661-343-3218			
City of LA	Steve Pedersen	213-725-6308			
NRC ES	Michael Sica	310-628-0725			
NRC ES	Jim Kiatos	310-628-1211			
4. Prepared by: (Communications Unit) S. Garcia		Date / Time 02/09/11 1200			
COMMUNICATIONS LIST		ICS 205a-CG (Rev. 07/04)			



Initial Site Safety Plan
Project Name: Dominguez Channel Mystery Oil Spill



ICS KEY PERSONNEL - NRCS		
Project Manager	Mike Sica	310-628-0725
Project Supervisor	Jim Kiatos	310-628-1211
Regional Health & Safety Mgr	Aimee Wilson	310-629-1190
Safety Director	Mike Amen, CIH, CSP, CHMM	503-978-7297

...

Date: 1.17.11

Start Time: 0700

Job Number: 56448

☒ Land Emergency Response ☐ Marine Emergency Response ☐ Land Service ☐ Marine Service

SITE DESCRIPTION	This site specific health and safety plan has been developed to provide a safe work environment for the contracted work to be performed at Leeds Avenue near the intersection with Grant Street in Wilmington, California.
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SCOPE OF WORK	<ul style="list-style-type: none">• Site Orientation prior to work assignment (layout, ingress; egress; emergency evac, phones)• Preventive booming: containment of liquids on the surface of the water to prevent migration into open water• Continue recovery of surface product• Follow waste segregation & recovery plan and keep separate from other wastes• Maintain established temporary sand bag containment pond• Continue skimming and recovery efforts to minimize downstream impacts to pump station• Assess cleanup issues to implement once source has been isolated
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EQUIPMENT	<ul style="list-style-type: none">• Pickup truck• Gear truck• Generator• Weir skimmer• Air compressor• 3" pump & hoses• Light tower• 4" trash pump• Baker tanks• Vacuum trucks• Emergency response trailer• Rocket launcher• Roll off bins• Combustible gas indicator (4 gas meter) w/ PID
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CHEMICAL INFORMATION (see MSDS)

CHEMICAL / CAS	CHEMICAL PROPERTIES	EXPOSURE LIMITS	ROUTES OF ENTRY	SYMPTOMS
Crude Oil (sour)	<input type="checkbox"/> VD = 3 - 5 <input type="checkbox"/> VP = variable <input type="checkbox"/> S.G. = AP 0.7 to 0.9 <input type="checkbox"/> FP = <73 to >200 F	PEL: 5 mg/m ³ as mineral oil mist	Inhalation Ingestion	Eye, nose and throat irritation, vertigo, nausea, dyspnea, central
Benzene	<input type="checkbox"/> S.G. = 0.88 <input type="checkbox"/> VP = 75mmHg <input type="checkbox"/> FP = 12 F <input type="checkbox"/> LEL: 1.2% <input type="checkbox"/> UEL = 7.8%	PEL: 1 ppm IDLH: 500ppm	<input type="checkbox"/> Contact <input type="checkbox"/> Inhalation <input type="checkbox"/> Ingestion <input type="checkbox"/> Absorption	Irrit eyes, skin, nose, resp sys; dizz; head, nau, staggered gait; anor, lass; derm; bone marrow depress;
Hydrogen Sulfide	<input type="checkbox"/> MW = 34.1 <input type="checkbox"/> Sol = 0.4% <input type="checkbox"/> IP 10.4 6eV <input type="checkbox"/> UEL = 44% <input type="checkbox"/> LEL = 4.0%	PEL: 20 ppm IDLH: 100ppm	<input type="checkbox"/> Inhalation <input type="checkbox"/> Contact	Irrit eyes, resp sys; apnea, coma, convuls; conj, eye pain, lac, photo; dizz, head



Initial Site Safety Plan
Project Name: Dominguez Channel Mystery Oil Spill



PERSONAL PROTECTIVE EQUIPMENT

TASK	Level	MASK /CARTRIDGE /AIR	ADDITIONAL PPE
Establish support area / prepare	D	N/A	Hardhats, safety glasses, nomex coveralls, tyvek coveralls, leather gloves, PVC steel toe boots
Preventive Booming	D	N/A	Hardhats, safety glasses, tyvek coveralls, leather gloves, PVC steel toe boots, PFD.
Operator – Vac Truck	D	N/A	Hardhats, full-face shields, safety glasses, hearing protection, coveralls, neoprene outer gloves, PVC steel toe boots, high visible traffic vests
Load / transport material	D	N/A	Hardhats, safety glasses, tyvek coveralls, nitrile liner gloves, steel toe boots, high visible traffic vests
Decontaminate equipment	D	N/A	Hardhats, full-face shields, safety glasses, poly coated tyvek coveralls, neoprene outer gloves, nitrile liner gloves, PVC steel toe boots
Confined Space Entrants – NOT ANTICIPATED AT THIS SITE	B	Full-face air positive pressure demand respirator	Hardhat, safety glasses, nomex coveralls, nitrile steel toe boots, nitrile liners, pvc gloves, full body harness, retrieval winch set up, safety/rescue line for winch retrieval

ACTIVITY HAZARD ANALYSIS

Hazards Throughout the Job		
ITEM	HAZARD	PREVENTION
General Work Area	Slip / trip / fall	<ul style="list-style-type: none">designated pathways cleared of debrisuse step ladders for platforms requiring climbing up or downsee attached safety memo regarding climbing on ladders/equip
General Work Area –lifting	Strain	<ul style="list-style-type: none">plan and stage to minimize long distance carryingsplit heavy loads into smaller loadsuse assistant for heavy or awkward load
General Work Area –Traffic	Struck by	<ul style="list-style-type: none">Set up visible barricades on access roads;Wear high visibility safety vests
Refueling Equipment	Fire Spill	<ul style="list-style-type: none">Flammable liquids in explosion proof containersNo flammable liquids or gas stored in unmarked containersFire extinguisher near refueling and storage areasArea in front of extinguishers kept clearSpill containment plan discussed and in place
Heat stress	Heavy PPE Lack of breeze	<ul style="list-style-type: none">Drink plenty of fluids
Traffic	Struck by	<ul style="list-style-type: none">Set up visible barricadesOnly authorized NRCES personnel in work zones

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Hazards Unique to Each Phase of Project		
ITEM	HAZARD	PREVENTION
Trains on active railway	Struck by train Uneven walking surface	<ul style="list-style-type: none">Must have flagger present at all times to grant access to walk near railwayReflective orange safety vests must be wornMust maintain a minimum distance of 25' from trackUse caution while walking on rocky surfaceEnsure steel toe boots are laced up and secure on ankle
Load containment materials	Material	<ul style="list-style-type: none">plan and stage to minimize long distance lifting /carrying



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Hazards Unique to Each Phase of Project		
into drop boxes	handling	<ul style="list-style-type: none"> split heavy loads into smaller loads use mechanical lifting aids when possible have assistant for heavy or awkward loads
Transport absorbent boom materials to and from work sites	Lifting Strain	<ul style="list-style-type: none"> Do not fill bags completely full buddy system for awkward loads
FLAMMABLE LIQUIDS	Smoking/ignition source	<ul style="list-style-type: none"> Post NO SMOKING signs around spill site/keep public out of work zone
Low visibility	No sunlight	<ul style="list-style-type: none"> Set up light towers Use head lamps on hard hats if needed
Liquid Pumping / agitation Into vacuum truck	Static Contact Liquid Spill	<ul style="list-style-type: none"> Bond and ground vacuum truck Bond and ground tank during cleaning / pumping Intrinsically safe equipment Spill containment plan discussed and in place during all cleaning operations Operator present at all times
Air monitoring	Inhalation Over exposure	<ul style="list-style-type: none"> Ensure current calibration Fresh air calibration Bump test MUST have (1) 4 gas meter per group in skiffs/vessels
Confined Space – NOT ANTICIPATED AT THIS SITE	Atmosphere Rescue Ventilation	<p>NRCES confined space permit for each entry. NRCES rescue /retrieval equipment in <i>Safety Required Sec.</i></p> <p><i>Note that this is horizontal rescue so may require wrist bands also</i></p>
Confined Space Entry - NOT ANTICIPATED AT THIS SITE	Hazardous Atmosphere Slips Trips Falls Illumination Opening of manhole	<ul style="list-style-type: none"> A confined space permit will be filled out by the supervisor prior to each entry at a new location. Pre-entry air monitoring will be conducted to confirm a non-hazardous atmosphere. Continuous air monitoring will be conducted by the hole watch and documented on NRCES' air monitoring log Forced air ventilation will be maintained All vertical entries will be made with the use of a winch and attendant. Three Points of contacts at all times when ascending or descending ladders Lower and raise equipment in buckets / ropes Any employee who participates in confined space entry has been trained in accordance with 29 CFR 1910.146 and 8 CCR 515. Good housekeeping practices will be maintained during entry. Ensure there are not any items sitting below the ladder that could pose a tripping hazard. Intrinsically safe flash lights & lights will be used to increase visibility in confined spaces When opening is removed, a "hole watch" will be posted at that position until the cover is replaced. Prior to entry, the confined space supervisor will fill out the confined space permit.

SAFETY EQUIPMENT REQUIRED:

✓	Eyewash / Shower	✓	Decon Pool / Supplies	✓	Wheel chocks for trucks
✓	First Aid Kit	✓	Fire Extinguisher (A/B/C)	✓	4 Way air monitoring instrument
✓	Reflective orange vest	✓	Barricades / rope	✓	Ladder

TRAINING REQUIREMENTS:

✓	HAZWOPER 40 / 24	✓	Hazwoper Supervisor	✓	Current 8 Hour Refresher
✓	First Aid /CPR	✓	Hazard Communication	✓	Incident Command System



Initial Site Safety Plan
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DECONTAMINATION AND DISPOSAL

DECONTAMINATION EQUIPMENT	
<input checked="" type="checkbox"/> Visqueen (Ground)	<input checked="" type="checkbox"/> Rags to wipe boot bottoms
<input checked="" type="checkbox"/> Carpet Strips (Ground)	<input checked="" type="checkbox"/> Labeled Drums for disposal items
<input checked="" type="checkbox"/> Decon Pool / wash boots	<input checked="" type="checkbox"/> chairs to sit on for PPE removal
	<input checked="" type="checkbox"/> Soap /Water to wash face / hands
	<input checked="" type="checkbox"/> Disposable Paper Towels
	<input checked="" type="checkbox"/> Caution tape to designate decon area
PERSONNEL DECONTAMINATION PLAN	
<input type="checkbox"/> Establish three stage contamination reduction zone with small decon area at exit	
<input type="checkbox"/> Lay down visqueen under barrier	
<input type="checkbox"/> Place empty lined and labeled drums for contaminated PPE	
<input type="checkbox"/> Untape gloves and boots	
<input type="checkbox"/> Rinse boots if not using boot covers	
<input type="checkbox"/> Sit on chair prior to removing boots or outer PPE	
<input type="checkbox"/> Remove boots and outer gloves ;	
<input type="checkbox"/> dispose of tape / boots / gloves in labeled drum	
<input type="checkbox"/> Unzip suit / pull off hood (if hooded)	
<input type="checkbox"/> Roll down suit / inside out and place into labeled container: DO NOT USE KNIVES TO CUT OFF PPE	
<input type="checkbox"/> Remove inner gloves	
<input type="checkbox"/> PPE and debris will be bagged, accounted for, and bulked into the applicable waste bin	



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EMERGENCY MEDICAL TREATMENT AND FIRST AID

TYPE CONTACT	FIRST AID
Eyes	<ul style="list-style-type: none">• Flush each eyes continuously for 15 minutes;• Tilt head to side to ensure liquid runs onto floor not other eye• refer to EMT for evaluation
Skin	<ul style="list-style-type: none">• Remove contaminated clothing immediately• Wash skin continuously for 15 minutes;• refer to physician if redness, swelling, or pain persists after washing
Breathing	<ul style="list-style-type: none">• Call 911;• Remove to fresh air immediately;• begin CPR until EMT arrives
Ingestion	<ul style="list-style-type: none">• aspiration hazard• do not induce vomiting• do not give anything by mouth

EMERGENCY RESPONSE PLAN
Attach Map to Nearest Hospital

ELEMENT	LOCATION, SPECIFICATION OR REASON FOR USE
NEAREST HOSPITAL	Pacific Hospital of Long Beach 2776 E Pacific Ave. Long Beach, CA 90806
NEAREST PHONE	Supervisor cell phone
FIRST AID KIT	Supervisor Truck
FIRE EXTINGUISHER	Supervisor truck and charged extinguishers on site
EYEWASH STATION AND EMERGENCY SHOWER	Supervisor will determine location on site or provide 55 gallon drum of water and hand pump
EVACUATION ROUTE / MEETING POINT	To be discussed and diagramed before start of job scope

ACCIDENT / INCIDENT REPORTING

NRCES Notification Requirements	
FIRST AID INJURIES REQUIRING MEDICAL TREATMENT VEHICLE ACCIDENT NEAR MISS	<ul style="list-style-type: none">▪ Employees immediately report all accidents or incidents to the Site Project Manager / Safety Officer▪ Site Project Supervisor will immediately notify the NRCES Project Manager via cell phone.▪ If unable to reach the Project Manager, contact the NRCES Operations or NRCES Safety Manager.▪ Call their cell phones▪ Safety Manager will provide employee disposition guidelines and coordinate an accident investigation either by himself or Project Supervisor▪ NRCES Project Manager will relay information to Project Site Superintendent▪ Accident reporting forms are available electronically▪ Report all incidents to NRCES Safety Director▪ Ensure incident documented on Daily Safety Meeting Form▪ Determination will be made regarding need for post accident drug testing

SAFETY PLAN APPROVAL

Site Safety Officer _____ **Date** _____

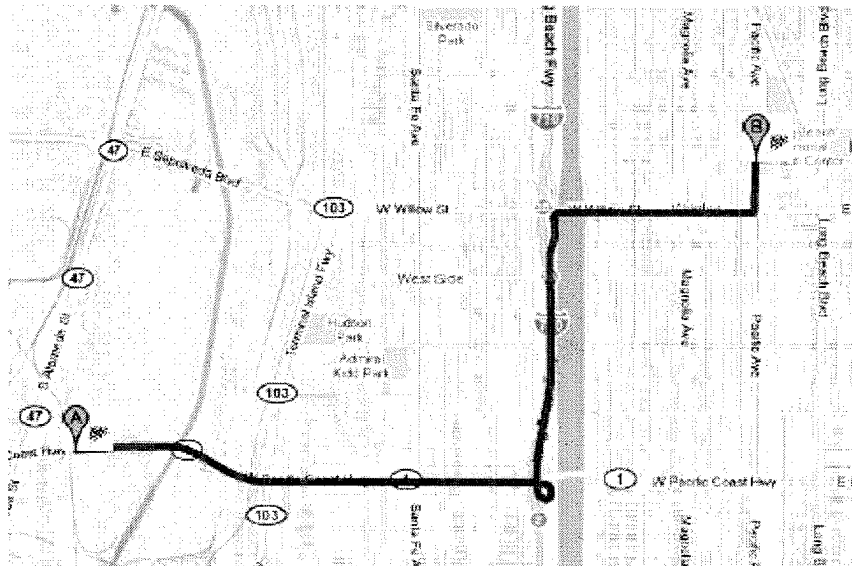
ACKNOWLEDGMENTS

I have read and understand the topics outlined on all pages of this HASP and will follow all the required safety rules.
****I am aware that I am to sign in at the beginning of the shift and sign out at the end of my shift on the daily safety meeting form.**
I must notify the on site supervisor of any injury /accident/ near miss that I had or observed during my shift**
I understand that I have the right to stop work and report any potential hazards to the NRCES Site Supervisor.
After an injury/accident/near miss is reported, the Site Supervisor must call the H & S Manager at 310-629-1190.

[illegible]

ATTACHMENT B

Medical Facilities



A 1926 E Pacific Coast Hwy, Los Angeles, CA 90744

- 1** 1. Head east on CA-1 S
About 2 mins
go 1.7 mi
total 1.7 mi
- 710** 2. Slight right to merge onto I-710 N toward Pasadena
About 1 min
go 1.0 mi
total 2.7 mi
- 7** 3. Take exit 3A for Willow St E
go 0.2 mi
total 3.0 mi
4. Merge onto W Willow St
About 2 mins
go 0.7 mi
total 3.7 mi
- 4** 5. Turn left at Pacific Ave
Destination will be on the right
About 1 min
go 0.2 mi
total 3.9 mi

B 2776 Pacific Ave, Long Beach, CA 90806



Initial Site Safety Plan
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ATTACHMENT A
MATERIAL SAFETY DATA SHEETS

Crude Oil (Sour)



NFPA 704 (Section 16)

AMERADA HESS CORPORATION**MATERIAL SAFETY DATA SHEET****Crude Oil (Sour)****MSDS No. 6608****1. CHEMICAL PRODUCT and COMPANY INFORMATION (rev. Jan-99)**

Amerada Hess Corporation
1 Hess Plaza
Woodbridge, NJ 07095-0961

EMERGENCY TELEPHONE NUMBER (24 hrs): **CHEMTREC (800) 424-9300**

COMPANY CONTACT (business hours): Corporate Safety (732) 750-6000

SYNONYMS: Crude Petroleum; Sour Crude

See Section 16 for abbreviations and acronyms.

2. COMPOSITION and INFORMATION ON INGREDIENTS (rev. Jan-99)

INGREDIENT NAME	EXPOSURE LIMITS	CONCENTRATION PERCENT BY WEIGHT
Petroleum Oil CAS NUMBER: 8002-05-9	OSHA PEL-TWA: 5 mg/m ³ as mineral oil mist ACGIH TLV-TWA: 5 mg/m ³ as mineral oil mist* *1997 NOIC: sum of 15 NTP-listed polynuclear aromatic hydrocarbons 0.005 mg/m ³ , A1	100
Hydrogen Sulfide (H ₂ S) CAS NUMBER: 7783-06-4	OSHA PEL-Ceiling/Peak: 20 / 50 ppm ACGIH TLV-TWA/STEL: 10 / 15 ppm	< highly variable - see below >
Benzene CAS NUMBER: 71-43-2	OSHA PEL-TWA/STEL: 1 / 5 ppm ACGIH TLV-TWA: 0.5 / 2.5 ppm, A1, skin US Coast Guard: same as OSHA	Variable AP 0.1 to 1.0

A natural product derived from various oil production field primarily consisting of a complex combination of paraffinic and aromatic hydrocarbons and small amounts of nitrogen and sulfur compounds.

Crude oils are generally referred to as "sour" if they can release dissolved hydrogen sulfide (H₂S) which could result in a hazardous condition. The amount of dissolved H₂S can vary considerably with the crude oil source. Some sour crude oils can have an appreciable percentage of H₂S.

3. HAZARDS IDENTIFICATION (rev. Jan-99; Tox 99)**EMERGENCY OVERVIEW****CAUTION!**

**FLAMMABLE LIQUID - MAY EVOLVE TOXIC AND FLAMMABLE HYDROGEN SULFIDE GAS -
SLIGHT TO MODERATE IRRITANT - EFFECTS CENTRAL NERVOUS SYSTEM - HARMFUL OR
FATAL IF SWALLOWED**

High fire hazard. Keep away from heat, spark, open flame, and other ignition sources.

HYDROGEN SULFIDE (toxic gas) may be released. High concentration may cause immediate unconsciousness - death may result unless victim is promptly and successfully resuscitated. Hydrogen sulfide causes eye irritation.

If ingested, do NOT induce vomiting, as this may cause chemical pneumonia (fluid in the lungs). Contact may cause eye, skin and mucous membrane irritation. Avoid prolonged breathing of vapors or mists. Inhalation may cause irritation, anesthetic effects (dizziness, nausea, headache, intoxication), and respiratory system effects.

Long-term exposure may cause effects to specific organs, such as to the liver, kidneys, blood, nervous system, and skin. Contains benzene, which can cause blood disease, including anemia and leukemia.

EYES

Contact with eyes may cause moderate to severe irritation.

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SKIN

Practically non-toxic if absorbed following acute (single) exposure. May cause skin irritation with prolonged or repeated contact. Liquid may be absorbed through the skin in toxic amounts if large areas of skin are exposed repeatedly. Rare, precancerous warts on the forearms, backs of hands and scrotum have been reported from prolonged or repeated skin contact.

INGESTION

The major health threat of ingestion occurs from the danger of aspiration (breathing) of liquid drops into the lungs, particularly from vomiting. Aspiration may result in chemical pneumonia (fluid in the lungs), severe lung damage, respiratory failure and even death.

Ingestion may cause gastrointestinal disturbances, including irritation, nausea, vomiting and diarrhea, and central nervous system (brain) effects similar to alcohol intoxication. In severe cases, tremors, convulsions, loss of consciousness, coma, respiratory arrest, and death may occur.

INHALATION

Excessive exposure may cause irritations to the nose, throat, lungs and respiratory tract. Central nervous system (brain) effects may include headache, dizziness, loss of balance and coordination, unconsciousness, coma, respiratory failure, and death.

WARNING: Irritating and toxic hydrogen sulfide gas may be found in confined vapor spaces. Greater than 15 - 20 ppm continuous exposure can cause mucous membrane and respiratory tract irritation. 50 - 500 ppm can cause headache, nausea, and dizziness, loss of reasoning and balance, difficulty in breathing, fluid in the lungs, and possible loss of consciousness. Greater than 500 ppm can cause rapid or immediate unconsciousness due to respiratory paralysis and death by suffocation unless the victim is removed from exposure and successfully resuscitated.

The "rotten egg" odor of hydrogen sulfide is not a reliable indicator for warning of exposure, since olfactory fatigue (loss of smell) readily occurs, especially at concentrations above 50 ppm. At high concentrations, the victim may not even recognize the odor before becoming unconscious.

CHRONIC and CARCINOGENICITY

Similar products produced skin cancer and systemic toxicity in laboratory animals following repeated applications. This product contains polynuclear aromatic hydrocarbons which have been shown to be carcinogenic in laboratory animals after repeated and prolonged skin contact. The significance of these results to human exposures has not been determined - see Section 11, Toxicological Information.

Contains benzene, a regulated human carcinogen. Benzene has the potential to cause anemia and other blood diseases, including leukemia, after repeated and prolonged exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Irritation from skin exposure may aggravate existing open wounds, skin disorders, and dermatitis (rash). Pre-existing, chronic respiratory disease, liver or kidney dysfunction, or central nervous system disorders may be aggravated by exposure.

4. FIRST AID MEASURES (rev. Jan-99; Tox-99)

EYES

In case of contact with eyes, immediately flush with clean, low-pressure water for at least 15 min. Hold eyelids open to ensure adequate flushing. Seek medical attention.

SKIN

Remove contaminated clothing. Wash contaminated areas thoroughly with soap and water or waterless hand cleanser. Obtain medical attention if irritation or redness develops. Thermal burns require immediate medical attention depending on the severity and the area of the body burned.

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INGESTION

DO NOT INDUCE VOMITING. Do not give liquids. Obtain immediate medical attention. If spontaneous vomiting occurs, lean victim forward to reduce the risk of aspiration. Monitor for breathing difficulties. Small amounts of material which enter the mouth should be rinsed out until the taste is dissipated.

INHALATION

Remove person to fresh air. If person is not breathing provide artificial respiration. If necessary, provide additional oxygen once breathing is restored if trained to do so. Seek medical attention immediately.

5. FIRE FIGHTING MEASURES (rev. Oct-94)

FLAMMABLE PROPERTIES:

FLASH POINT: < 73 to > 200 °F (< 23 to > 93 °C)
AUTOIGNITION TEMPERATURE: N/D
OSHA/NFPA FLAMMABILITY CLASS: 1B (flammable liquid)
LOWER EXPLOSIVE LIMIT (%): N/D
UPPER EXPLOSIVE LIMIT (%): N/D

FIRE AND EXPLOSION HAZARDS

Flash point and explosive limits are highly dependent on the crude oil source. Treat as an OSHA/NFPA flammable liquid unless otherwise indicated. Vapors may be ignited rapidly when exposed to heat, spark, open flame or other source of ignition. When mixed with air and exposed to an ignition source, flammable vapors can burn in the open or explode in confined spaces. Being heavier than air, vapors may travel long distances to an ignition source and flash back. Runoff to sewer may cause fire or explosion hazard.

EXTINGUISHING MEDIA

SMALL FIRES: Any extinguisher suitable for Class B fires, dry chemical, CO2, water spray, fire fighting foam, or Halon.

LARGE FIRES: Water spray, fog or fire fighting foam. Water may be ineffective for fighting the fire, but may be used to cool fire-exposed containers.

FIRE FIGHTING INSTRUCTIONS

Small fires in the incipient (beginning) stage may typically be extinguished using handheld portable fire extinguishers and other fire fighting equipment.

Firefighting activities that may result in potential exposure to high heat, smoke or toxic by-products of combustion should require NIOSH/MSHA- approved pressure-demand self-contained breathing apparatus with full facepiece and full protective clothing.

Isolate area around container involved in fire. Cool tanks, shells, and containers exposed to fire and excessive heat with water. For massive fires the use of unmanned hose holders or monitor nozzles may be advantageous to further minimize personnel exposure. Major fires may require withdrawal, allowing the tank to burn. Large storage tank fires typically require specially trained personnel and equipment to extinguish the fire, often including the need for properly applied fire fighting foam.

See Section 16 for the NFPA 704 Hazard Rating.

6. ACCIDENTAL RELEASE MEASURES (rev. Jan-99)

ACTIVATE FACILITY'S SPILL CONTINGENCY OR EMERGENCY RESPONSE PLAN.

Evacuate nonessential personnel and remove or secure all ignition sources. Consider wind direction; stay upwind and uphill, if possible. Evaluate the direction of product travel, diking, sewers, etc. to confirm spill areas. Hydrogen sulfide may be evolved during a release - ensure response personnel are adequately protected - see Section 8.

Carefully contain and stop the source of the spill, if safe to do so. Protect bodies of water by diking, absorbents, or absorbent boom, if possible. Do not flush down sewer or drainage systems, unless system

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is designed and permitted to handle such material. The use of fire fighting foam may be useful in certain situations to reduce vapors.

Take up with sand or other oil absorbing materials. Carefully shovel, scoop or sweep up into a waste container for reclamation or disposal. Response and clean-up crews must be properly trained and must utilize proper protective equipment.

7. HANDLING and STORAGE (rev. Jan-99)

HANDLING PRECAUTIONS

Handle as a flammable liquid. Keep away from heat, sparks, and open flame! Electrical equipment should be approved for classified area. Bond and ground containers during product transfer to reduce the possibility of static-initiated fire or explosion.

STORAGE PRECAUTIONS

Keep away from flame, sparks, excessive temperatures and open flame. Use approved vented containers. Keep containers closed and clearly labeled. Empty product containers or vessels may contain explosive vapors. Do not pressurize, cut, heat, weld or expose such containers to sources of ignition.

Store in a well-ventilated area. This storage area should comply with NFPA 30 "Flammable and Combustible Liquid Code". Avoid storage near incompatible materials. The cleaning of tanks previously containing this product should follow API Recommended Practice (RP) 2013 "Cleaning Mobile Tanks In Flammable and Combustible Liquid Service" and API RP 2015 "Cleaning Petroleum Storage Tanks".

Hydrogen sulfide may accumulate in tanks and bulk transport compartments. Consider appropriate respiratory protection (see Section 8). Stand upwind. Avoid vapors when opening hatches and dome covers. Confined spaces should be ventilated prior to entry.

WORK/HYGIENIC PRACTICES

Emergency eye wash capability should be available in the near proximity to operations presenting a potential splash exposure. Use good personal hygiene practices. Avoid repeated and/or prolonged skin exposure. Wash hands before eating, drinking, smoking, or using toilet facilities. Do not use as a cleaning solvent on the skin. Do not use gasoline or solvents (naphtha, kerosene, etc.) for washing this product from exposed skin areas. Waterless hand cleaners are effective. Promptly remove contaminated clothing and laundry before reuse. Use care when laundering to prevent the formation of flammable vapors which could ignite via washer or dryer. Consider the need to discard contaminated leather shoes and gloves.

Naturally Occurring Radioactive Materials (NORM):

Industry experience indicates that this material may contain small amounts of naturally-occurring uranium, thorium, and their decay products (NORM) which can accumulate in oil production and process equipment, particularly the equipment handling the water associated with crude oil production. Scales, other deposits, and sludges from this equipment may have a significant accumulation of NORM. Gamma radiation above background may be detected external to equipment contaminated with NORM. Production equipment should be assessed for external gamma radiation; access may need to be restricted in accordance with OSHA 29 CFR 1910.96 during operation. Such equipment should also be assumed to be internally contaminated with long half-life decay products that emit alpha radiation, which is a hazard if inhaled or ingested. Unless measurements indicate otherwise, steps should be taken to minimize skin and inhalation exposure to NORM dusts/mists by wearing personal protective clothing [such as disposable Tyvek® (DuPont)], utilizing respiratory protection (minimum of HEPA filter), and practicing good personal hygiene. Please refer to API Bulletin E2, "Bulletin on Management of Naturally Occurring Radioactive Materials in Oil and Gas Production," April 1, 1992, for additional information on managing NORM.

8. EXPOSURE CONTROLS and PERSONAL PROTECTION (rev. Jan-99)

ENGINEERING CONTROLS

Use adequate ventilation to keep vapor concentrations of this product below occupational exposure and flammability limits, particularly in confined spaces.

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EYE/FACE PROTECTION

Safety glasses or goggles are recommended where there is a possibility of splashing or spraying

SKIN PROTECTION

Gloves constructed of nitrile, neoprene, or PVC are recommended. Chemical protective clothing such as of E.I. DuPont Tyvek QC®, Saranex®, TyChem® or equivalent recommended based on degree of exposure. Note: The resistance of specific material may vary from product to product as well as with degree of exposure. Consult manufacturer specifications for further information

RESPIRATORY PROTECTION

If a hydrogen sulfide hazard is present (that is, exposure potential above H₂S permissible exposure limit), use a positive-pressure SCBA or Type C supplied air respirator with escape bottle.

Where it has been determined that there is no hydrogen sulfide exposure hazard (that is, exposure potential below H₂S permissible exposure limit), a NIOSH/ MSHA-approved air-purifying respirator with organic vapor cartridges or canister may be permissible under certain circumstances where airborne concentrations are or may be expected to exceed exposure limits or for odor or irritation. Protection provided by air-purifying respirators is limited. Refer to OSHA 29 CFR 1910.134, ANSI Z88.2-1992, NIOSH Respirator Decision Logic, and the manufacturer for additional guidance on respiratory protection selection.

Use a positive pressure, air-supplied respirator if there is a potential for uncontrolled release, exposure levels are not known, in oxygen-deficient atmospheres, or any other circumstance where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL and CHEMICAL PROPERTIES (rev. Oct-94)

APPEARANCE

Variable depending on its source; typical is a thick, dark yellow to brown or greenish black liquid

ODOR

A characteristic, petroleum/asphalt-type odor

Hydrogen sulfide (H₂S) has a rotten egg "sulfurous" odor. This odor should not be used as a warning property of toxic levels because H₂S can overwhelm and deaden the sense of smell. Also, the odor of H₂S in heavy oils can easily be masked by the petroleum-like odor of the oil. Therefore, the smell of H₂S should not be used as an indicator of a hazardous condition - a H₂S meter or colorimetric indicating tubes are typically used to determine the concentration of H₂S.

BASIC PHYSICAL PROPERTIES

The properties of crude oil are highly variable depending on its source.

BOILING RANGE: AP 100 - 1000+ °F (> 260 °C)

VAPOR PRESSURE: Variable

VAPOR DENSITY (air = 1): 3 - 5 typical

SPECIFIC GRAVITY (H₂O = 1): AP 0.7 to 0.9 (varies)

PERCENT VOLATILES: Variable

EVAPORATION RATE: Variable

SOLUBILITY (H₂O): Insoluble to slightly soluble

10. STABILITY and REACTIVITY (rev. Oct-94)

STABILITY: Stable. Hazardous polymerization will not occur.

CONDITIONS TO AVOID and INCOMPATIBLE MATERIALS

Material is stable under normal conditions. Avoid high temperatures, open flames, sparks, welding, smoking and other ignition sources. Keep away from strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon monoxide, carbon dioxide and non-combusted hydrocarbons (smoke).

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11. TOXICOLOGICAL PROPERTIES (rev. Jan-99; Tox-99)

CHRONIC EFFECTS AND CARCINOGENICITY

Carcinogenicity: OSHA: NO IARC: NO NTP: NO ACGIH: 1997 NOIC: A1

Dermal carcinogenicity: positive - mice

Studies have shown that similar products produce skin tumors in laboratory animals following repeated applications without washing or removal. The significance of this finding to human exposure has not been determined. Other studies with active skin carcinogens have shown that washing the animal's skin with soap and water between applications reduced tumor formation.

This product contains benzene. Human health studies indicate that prolonged and/or repeated overexposure to benzene may cause damage to the blood-forming system (particularly bone marrow), and serious blood disorders such as aplastic anemia and leukemia. Benzene is listed as a human carcinogen by the NTP, IARC, OSHA and ACGIH.

MUTAGENICITY (genetic effects)

Some crude oils and crude oil fractions have been positive in mutagenicity studies.

12. ECOLOGICAL INFORMATION (rev. Jan-99)

Keep out of sewers, drainage and waterways. Report spills and releases, as applicable, under Federal and State regulations.

13. DISPOSAL CONSIDERATIONS (rev. Jan-99)

Consult federal, state and local waste regulations to determine appropriate disposal options.

14. TRANSPORTATION INFORMATION (rev. Jan-99)

PROPER SHIPPING NAME: PETROLEUM CRUDE OIL
HAZARD CLASS; PACKING GROUP: 3; determine flash point to accurately classify packing group
DOT IDENTIFICATION NUMBER: UN 1267
DOT SHIPPING LABEL: FLAMMABLE LIQUID

15. REGULATORY INFORMATION (rev. Jan-99)

U.S. FEDERAL, STATE and LOCAL REGULATORY INFORMATION

This product and its constituents listed herein are on the EPA TSCA Inventory. Any spill or uncontrolled release of this product, including any substantial threat of release, may be subject to federal, state and/or local reporting requirements. This product and/or its constituents may also be subject to other regulations at the state and/or local level. Consult those regulations applicable to your facility/operation.

CLEAN WATER ACT (OIL SPILLS)

Any spill or release of this product to "navigable waters" (essentially any surface water, including certain wetlands) or adjoining shorelines sufficient to cause a visible sheen or deposit of a sludge or emulsion must be reported immediately to the National Response Center (1-800-424-8802) or, if not practical, the U.S. Coast Guard with follow-up to the National Response Center, as required by U.S. Federal Law. Also contact appropriate state and local regulatory agencies as required.

CERCLA SECTION 103 and SARA SECTION 304 (RELEASE TO THE ENVIRONMENT)

The CERCLA definition of hazardous substances contains a "petroleum exclusion" clause which exempts crude oil, refined, and unrefined petroleum products and any indigenous components of such. However, other federal reporting requirements (e.g., SARA Section 304 as well as the Clean Water Act if the spill occurs on navigable waters) may still apply.

SARA SECTION 311/312 - HAZARD CLASSES

ACUTE HEALTH	CHRONIC HEALTH	FIRE	SUDDEN RELEASE OF PRESSURE	REACTIVE
X	X	X	--	--

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SARA SECTION 313 - SUPPLIER NOTIFICATION

This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act (EPCRA) of 1986 and of 40 CFR 372:

INGREDIENT NAME (CAS NUMBER)	CONCENTRATION WT. PERCENT
Benzene (71-43-2)	0.1 to 1.0

CANADIAN REGULATORY INFORMATION (WHMIS)

Class B, Division 2 (flammable liquid)

Class D, Division 1A (Very toxic, acute)

Class D, Division 1B (Very toxic by other means)

16. OTHER INFORMATION (rev. Feb-00)

NFPA® HAZARD RATING	HEALTH:	2	Moderate
	FIRE:	3	High
	REACTIVITY:	0	Negligible

HMIS® HAZARD RATING	HEALTH:	3*	High
	FIRE:	3	High
	REACTIVITY:	0	Negligible

*Chronic

SPECIAL HAZARDS: May release toxic hydrogen sulfide (poison gas).

SUPERSEDES MSDS DATED: 01/27/99

ABBREVIATIONS:

AP = Approximately < = Less than > = Greater than
N/A = Not Applicable N/D = Not Determined ppm = parts per million

ACRONYMS:

ACGIH	American Conference of Governmental Industrial Hygienists	OPA	Oil Pollution Act of 1990
AIHA	American Industrial Hygiene Association	OSHA	U.S. Occupational Safety & Health Administration
ANSI	American National Standards Institute (212) 642-4900	PEL	Permissible Exposure Limit (OSHA)
API	American Petroleum Institute (202) 682-8000	RCRA	Resource Conservation and Recovery Act
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act	REL	Recommended Exposure Limit (NIOSH)
DOT	U.S. Department of Transportation [General Info: (800)467-4922]	SARA	Superfund Amendments and Reauthorization Act of 1986 Title III
EPA	U.S. Environmental Protection Agency	SCBA	Self-Contained Breathing Apparatus
HMIS	Hazardous Materials Information System	SPCC	Spill Prevention, Control, and Countermeasures
IARC	International Agency For Research On Cancer	STEL	Short-Term Exposure Limit (generally 15 minutes)
MSHA	Mine Safety and Health Administration	TLV	Threshold Limit Value (ACGIH)
NFPA	National Fire Protection Association (617) 770-3000	TSCA	Toxic Substances Control Act
NIOSH	National Institute of Occupational Safety and Health	TWA	Time Weighted Average (8 hr.)
NOIC	Notice of Intended Change (proposed change to ACGIH TLV)	WEEL	Workplace Environmental Exposure Level (AIHA)
NTP	National Toxicology Program	WHMIS	Canadian Workplace Hazardous Materials Information System

AMERADAHESSE CORPORATION

MATERIAL SAFETY DATA SHEET

Crude Oil (Sour)

MSDS No. 6608

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